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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/589,675

08/16/2006

Motoyuki Ohtake

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EXAMINER

COLLINS, DARRYL J

ART UNIT

PAPER NUMBER

2873

MAIL DATE

DELIVERY MODE

04/24/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/589,675	Applicant(s) OHTAKE ET AL.	
	Examiner DARRYL J. COLLINS	Art Unit 2873	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 August 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>05182007,08152007,06302008 and 03112009.</u> | 6) <input type="checkbox"/> Other: ____. |

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DETAILED ACTION

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

The information disclosure statements (IDS) submitted on May 18, 2007, August 15, 2007 and June 30, 2008 have been considered by the examiner. The citation appearing on the IDS submitted on March 11, 2009 has not been considered as the reference was not submitted in English.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 4 and 8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The conditional expression as written is indefinite and it is unclear as to what exactly is being claimed. The examiner has interpreted the conditional expression as " $0.3 < |f_2| / \sqrt{(f_w \cdot f_t)} < 0.4$ ".

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3 and 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kohno (U.S. Patent Number 6,400,515) in view of Kitaoka et al (U.S. Patent Number 6,710,932).

Kohno teaches a zoom lens comprising a first lens group having a positive refractive power, a second lens group having negative refractive power, a third lens group having positive refractive power and a fourth lens group having positive refractive power (column 6, lines 39-43), wherein the first and third lens groups are fixed during the zooming function (column 6, line 43), the third lens group comprises an aperture diaphragm (Figure 1, element S), and the second lens group includes a negative meniscus with a concave surface to the image side and having an aspheric surface on the image side thereof (Table 1 and Figure 1, element G4) and a cemented lens of a biconcave lens (Figure 1, element G5) and a positive lens with a convex surface to the object side (Table 1 and Figure 1, element G6) and satisfying the conditional expression as claimed in independent claim 1 and further teaches a image pickup element (Figure 2, element A1) as claimed in independent claim 5, but fails to teach the negative meniscus of the second groups as being a compound lens of a glass lens and a resin lens. Although the material choice is believed to be of insignificance in the construction of the zoom lens as long as the optical characteristics necessary for the zoom lens system are achieved, a secondary reference is

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presented herewith. Kitaoka et al teaches a four group zoom lens system comprising similar elements and refractive powers, but more importantly, Kitaoka et al teaches such a zoom lens system wherein the well-known technique of molding an aspheric surface by forming a hybrid lens by placing a plastic or resin layer on a spherical glass lens (column 1, lines 61-64) such that it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the negative meniscus lens of the second lens group as taught by Kohno with the glass/resin hybrid lens as taught by Kitaoka et al for a less expensive alternative to a glass aspheric lens.

With regard to claims 2, 3, 6 and 7, Kohno and Kitaoka et al teach a zoom lens system meeting all of the claimed limitations of the instant invention as outlined above with respect to claims 1 and 5, wherein Kohno further teaches such a zoom lens system satisfying the conditional expressions as claimed in dependent claims 2, 3, 6 and 7 (Table 1).

Allowable Subject Matter

Claims 4 and 8 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: The prior art taken either singularly or in combination fails to anticipate or fairly suggest the limitations of the independent claims, in such a manner that a rejection under 35 U.S.C. §102 or §103 would be proper. Although the prior art teaches a zoom lens and image pickup comprising a zoom lens, comprising a first lens group having a positive refractive power, a second lens

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group having negative refractive power, a third lens group having positive refractive power and a fourth lens group having positive refractive power, wherein the first and third lens groups are fixed during the zooming function, the third lens group comprises an aperture diaphragm, and the second lens group includes a negative meniscus with a concave surface to the image side and having an aspheric surface on the image side thereof and a cemented lens of a biconcave lens and a positive lens with a convex surface to the object side and satisfying the conditional expression as claimed, the prior art fails to teach such a zoom lens satisfying the conditional expression $0.3 < |f_2| / \sqrt{(f_w \cdot f_t)} < 0.4$, as best understood by the examiner.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Ori (U.S. Patent Number 6,741,399) teaches a four group zoom lens.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DARRYL J. COLLINS whose telephone number is (571)272-2325. The examiner can normally be reached on 6:30 - 5:00 Monday - Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Mack can be reached on 571-272-2333. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Darryl J. Collins/
Primary Examiner
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23 April 2009